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REMARKS

Claim 11 has been amended to correct a self-evident typographical error.

Claims 40-44 have been added to more clearly define that which Applicants regard as the invention. Support for new claims 40 and 41 can be found in the originally filed claims and in the specification, for example, at page 5, lines 7-9. Support for new claims 42-44 can be found in the specification, for example, at page 5, lines 5-11.

Rejection of Claims 7-8 under 35 U.S.C. § 112, second paragraph

Claims 7 and 8 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The Examiner stated that the term "pre-polymerized polymer component and monomer" lacks antecedent basis in amended claim 1.

Claim 7 has been amended to more clearly define that which Applicants regard as the invention. Support for the amendment to Claim 7 can be found in the specification, for example, at page 5, lines 3-11. As amended, it is believed that Claims 7 and 8 are definite and meet the requirements under 35 U.S.C. § 112, second paragraph. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 21 and 22 under 35 U.S.C. §103(a)

Claims 21 and 22 were rejected under 35 U.S.C. § 103(a) as being obvious over Podszun (U.S. Patent No. 4,617,327).

The Examiner stated that the rejection for Claims 21 and 22 was maintained for "reason of record with [the] following response. The claims do not require the limitation (a) recited in claim 1 contrary to applicant's assertion."

Claims 21 and 22 have been amended to more clearly define that which Applicants regard as the invention. Support for the amendment to Claim 21 is found, for example, at page 2, lines 28 through page 3, line 3.

As described in the previous response, Podszun teaches a solid particulate component for use in dental materials which is referred to in the cited document as a "filler". As discussed

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throughout the cited document and in particular at column 2, lines 8-26, this component includes an "inorganic core" that "consists of" inorganic particles with a particle size of 10 to 500 nm, a first shell of vinyl silane and a second shell of a (meth)acrylate polymer. To produce this component, the reference teaches silanizing the inorganic particles with a mixture of vinylsilane, water and acid in a first step, followed by "encasing" the silanized inorganic particles with meth(acrylate) polymers, by polymerization, in a second step. Podszun, at column 2, lines 8-18. Formation of a dental material is taught in Example 4 of the reference. It includes kneading together the polymerized solid (meth)acrylate particles, that already encase the inorganic core, with other components; the resulting paste-like composition is pressed into teeth molds and hardened.

Podszun discloses a material in which inorganic particles with a particle size of 10 to 500 nm are present as a core within the interior region of a solid (meth)acrylate shell. There is no teaching, suggestion, or motivation in Podszun for a material where the inorganic particles are outside the solid (meth)acrylate shell. Furthermore, the cited reference does not teach, suggest, or motivate one of ordinary skill in the art to disperse the inorganic particles within the polymer matrix to produce Applicants' claimed materials. Such dispersal of the filler within the inner bead matrix of Applicants' claimed material has been shown to provide beneficial properties which could not have been expected by the person of ordinary skill in the art.

Claims 21 and 22 are directed to a polymeric powder comprising a polymer component and a nanoencapsulated solid filler having an average mass diameter which is less than 1000 nanometers, wherein the polymer component and the solid filler are admixed to produce a uniformly dispersed powder. Unlike Podszun, Claims 21 and 22, describe a powder in which the nanoencapsulated solid filler is not contained within the polymer component (e.g., poly(methyl methacrylate), poly(methyl methacrylate-co-styrene)). When Applicants' claimed powder is combined with the liquid component and polymerized, the filler is dispersed within the regions occupied by the polymerized liquid component. Nothing is taught or suggested by Podszun to teach, suggest, or motivate one of ordinary skill in the art to provide a powder to achieve the nanocomposite surgical material of the present invention.

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Applicants respectfully submit that Claims 21 and 22, as amended, meet the requirements of 35 U.S.C. § 103(a). Reconsideration and withdrawal of this rejection are respectfully requested.

Entry of New Claims 40-44

New Claims 40-44 are presented herein for the first time and find support in the specification as stated above. Entry of these claims into the record is respectfully requested because these claims 1) do not raise new issues for consideration by the Examiner; 2) require no additional searching; and 3) are novel and nonobvious over the prior art cited by the Examiner. Applicants respectfully submit that these claims were not previously presented because Applicants did not fully appreciate and claim certain embodiments which they are entitled to claim.

Claims 40 and 41 depend upon existing Claim 21. Claim 40 further adds a polymerization initiator to the polymeric powder. Claim 41 provides that the filler has radio-opaque properties (see examined Claim 1, for example). The Examiner's rejection of Claim 21 was based on the fact that Claim 21 did not recite limitation (a) from Claim 1. Applicants have amended Claim 21 to include this limitation. As amended Claim 21 is non-obvious over the prior art and is in condition for allowance. Claims 40 and 41 further limit Claim 21 and thus are also not obvious.

Claims 42-44 are directed to precursors for preparing a nanocomposite surgical material comprising a polymeric powder component and a liquid component comprising a polymerizable monomer. No additional searching is believed to be required because the Examiner has adequately searched the polymeric powder component (see examined Claims 21 and 22) and the surgical material produced by the precursors. As argued above, Claim 21 and Claim 22, which depends from Claim 21, are not obvious over the cited prior art. Therefore, Claims 42-44, directed to precursors for preparing a nanocomposite surgical material comprising the polymeric powder of Claim 21 is also not obvious.

Entry of Claims 40-44 is respectfully requested.

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CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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